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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/811,585

03/20/2001

Nobuhiko Noma

P20804

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7055

7590

08/26/2004

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EXAMINER

ODOM, CURTIS B

ART UNIT

PAPER NUMBER

2634

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/811,585	<b>Applicant(s)</b> NOMA ET AL.	
	<b>Examiner</b> Curtis B. Odom	<b>Art Unit</b> 2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2001.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 3/30/2000. It is noted, however, that applicant has not filed a certified copy of the Japan application as required by 35 U.S.C. 119(b).

### ***Specification***

2. The abstract of the disclosure is objected to because of the following:

- a. The reference numbers are suggested to be deleted.
- b. On lines 3-5, the phrase "a product of the present sampling data by the sampling data 1 data unit ahead" is suggested to be changed to "a product of the present sampling data and the sampling data one data unit ahead".
- c. On lines 6-7, the phrase "for every sampling by going back to the time point 1 data unit ahead" is suggested to be changed to "for every sampling by adding product values calculated from previous samples occurring one data unit in advance".
- d. On line 8, "CP" is suggested to be changed to "cyclic prefix".

Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities:

- a. Throughout the specification, "CP" is suggested to be changed to "cyclic prefix".

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- b. Throughout the specification “segue” and “reverb” are suggested to be capitalized (SEGUE and REVERB).
- c. Throughout the specification “1 data unit” is suggested to be changed to “one data unit”.
- d. On page 1, line 21, “forbackbone” is suggested to be changed to “for backbone”.
- e. On page 2, line 18, define “G. Lite”.
- f. On page 6, line 8, “auto” is suggested to be changed to “automatic”.
- g. On page 8, line 19, “1 symbol” is suggested to be changed to “one symbol”.
- h. On page 10, line 16, “1 entire” is suggested to be changed to “one entire”.
- i. On page 10, line 26, “1<sup>ST</sup> symbol” is suggested to be changed to “first symbol”.
- j. On page 11, line 2, “1<sup>ST</sup> symbol” is suggested to be changed to “first symbol”.
- k. On page 11, line 18, “1 sample” is suggested to be changed to “one sample”.
- l. On page 11, line 24, “or not” is suggested to be deleted.
- m. On page 12, line 25-28, the paragraph is suggested to be placed as the first paragraph of this application.

Appropriate correction is required.

### ***Claim Objections***

- 4. Claims 1-10 are objected to because of the following informalities:
  - a. In claims 1-10, “1 data unit” is suggested to be changed to “one data unit”.

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- b. In claims 3 and 10, segue” and “reverb” are suggested to be capitalized (SEGUE and REVERB).
- c. In claim 1, lines 8-10, the phrase “for every sampling by going back to the time point 1 data unit ahead” is suggested to be changed to “for every sampling by adding product values calculated from previous samples occurring one data unit in advance”.
- d. In claim 1, line 12, “the addition value” is suggested to be changed to “an addition value”.
- e. In claim 2, line 16, “the time series” is suggested to be changed to “a time series”.
- f. In claim 2, lines 17-18, “the sampling timing” is suggested to be changed to “a sampling timing”.
- g. In claim 3, line 22, “the sum” is suggested to be changed to “a sum”.
- h. In claim 3, line 24, “the final” is suggested to be changed to “a final”.
- i. In claim 3, line 26, “the first” is suggested to be changed to “a first”.
- j. In claim 4, lines 2-3, “the position 9 symbols” is suggested to be changed to “a position nine symbols”.
- k. In claim 8, lines 20-21, the phrase “for every sampling by going back to the time point 1 data unit ahead” is suggested to be changed to “for every sampling by adding product values calculated from previous samples occurring one data unit in advance”.
- l. In claim 8, line 12, “said addition value” is suggested to be changed to “an addition value”.
- m. In claim 9, lines 27-28, “the time series” is suggested to be changed to “a time series”.

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- n. In claim 9, line 28, "the sampling" is suggested to be changed to "a sampling".
- o. In claim 10, line 5, "the sum" is suggested to be changed to "a sum".
- p. In claim 10, lines 6-7, "the final" is suggested to be changed to "a final".
- q. In claim 10, lines 8-9, "the first" is suggested to be changed to "a first".
- r. In claim 10, line 10, "is detected" is suggested to be deleted.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "CP" in claims 1-10 is a term which renders the claims indefinite. The term "CP" is not defined by the claim, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Therefore, it is suggested that the term "CP" be replaced with the phrase "cyclic prefix" in claims 1-10.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Miao et al. (U. S. Patent No. 6, 279, 022) discloses detecting a cyclic prefix by summing a channel estimate over a pre-defined cyclic prefix range.

Dagdeviren et al. (U. S. Patent No. 6, 519, 291) discloses detecting comparing samples to detect a cyclic prefix.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 703-305-4097. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Curtis Odom  
August 10, 2004



**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINER**  
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